



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,655	03/30/2001	David B. Kramer	KRAMER 5-9	7660
27964	7590	10/22/2004	EXAMINER	
HITT GAINES P.C. P.O. BOX 832570 RICHARDSON, TX 75083			JUNTIMA, NITTAYA	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/822,655	Applicant(s) K KRAMER ET AL.	
	Examiner Nittaya Juntima	Art Unit 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 and 21 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because:

- in Fig. 1, items 120-170 need descriptive text labels;
- in Fig. 2, items 220 “FPP”, item 230 “RSP”, and item 240 “SIP” should be spelled out accordingly; and
- in Fig. 3, item 318 “ALU” should be spelled out.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: on page 1, paragraph 0001, the U.S Patent Application number or status of the cited application is required.

Appropriate correction is required.

Claim Objections

3. Claims 1-7, 13, and 20 are objected to because of the following informalities:

- in claims 6, 13, and 20, ll 3, "the group" should be changed to "a group;" and
- in claims 1-7, "configured to" should be changed, i.e. "a virtual segmentation subsystem, ..., configured to perform virtual segmentation" at lines 5-7 of claim 1 should be changed to "a virtual segmentation subsystem, ..., performs virtual segmentation" to make the limitations positive. An alternative to the suggested change would be a written confirmation stating that each of the claimed element, i.e. a virtual segmentation subsystem, performs the actual function following "configured to." Please note that the statement on page 17 of the specification confirming the device having the necessary components to accomplish the stated task following "configured to" does not ensure that the device actually performs the stated task. It has been held that the recitation that an element "configured to" perform a function is *not* a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

Art Unit: 2663

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Chow et al. (USPN 6,052,387).

Per claim 1, as shown in Fig. 3, Chow et al. teach a virtual segmentation system comprising:

A protocol data unit receiver subsystem (the processor 34) receives least a portion protocol data unit (data of a PDU) and assemble said protocol data unit (the PDU is assembled by storing each data portion of the PDU in a linked list). See col. 2, ll 65-col. 3, ll 1-3, 28-35, Fig. 4A and col. 4, ll 8-13, and Fig. 5B and col. 6, ll 13-21, 33-37.

A virtual segmentation system (the controller 30), associated with said protocol data unit receiver subsystem, performs virtual segmentation on said protocol data unit. See col. 2, ll 65-col. 3, ll 1-3, 12-21, and Fig. 4A and col. 4, ll 57-col. 5, ll 1-3.

Per claim 2, Chow et al. further teach that said protocol data receiver subsystem further includes:

An assembler subsystem (the control of the software driver 40 in Fig. 3) receives said least a portion of said protocol data unit (data of a PDU) and assemble said protocol data. See col. 2, ll 65-col. 3, ll 1-3, 28-35, col. 4, ll 8-13, and Fig. 5B and col. 6, ll 13-21, 33-37.

Art Unit: 2663

A transmit queue subsystem (the software driver 40) maintains a linked associated with said protocol data unit, perform a function on said protocol data unit (process the PDU), and maintain least one queue structure transmission (a second data structure comprising a linked list). See col. 3, ll 48-52, and Fig. 4A, col. 4, ll 8-13 and 57-65.

Per claim 3, Chow et al. teach that the assembler subsystem (the control of the software driver 40 in Fig. 3) further stores said at least a portion of said protocol data unit (data of the PDU) in at least one block (one buffer), and said transmit queue subsystem (the software driver 40) further maintains a linked list of said least one block (a linked list must be maintained until the last buffer descriptor is received). See col. 3, ll 28-35, 48-52, col. 4, ll 8-13, and Fig. 5B and col. 6, ll 13-21, 34-47.

Per claim 4, Chow et al. teach that the virtual segmentation system (the controller 30 in Fig. 3) further includes a stream editor subsystem performs said virtual segmentation (the controller 30 segments the data into ATM cells, therefore, it must include a stream editor subsystem that performs segmentation, col. 3, ll 12-22).

Per claim 5, Chow et al. disclose that the stream editor subsystem (inherently included in the controller 30, see rejection of claim 4) further converts between a first protocol (a higher layer, e.g. an application program) and a second protocol (ATM). See col. 3, ll 28-35.

Claims 8-12 are method claims corresponding to system claims 1-5, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 1-5, respectively.

Claim Rejections - 35 USC § 103

Art Unit: 2663

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow et al. (USPN 6,052,387) in view of Richards et al. (USPN 6,614,793 B1).

Per claims 6 and 13, Chow et al. fail to teach that the stream editor subsystem further generates a validity check selected from a group consisting of:

cyclic redundancy check (CRC),

asynchronous transfer mode (ATM) adaptive layer (AAL5) over ATM, and

CRC-10 cells for operation, administration, maintenance (OAM) cells.

However, Richards et al. teach generating generate a validity check (error check calculation) selected from a group consisting of: CRC (10-bit CRC), AAL5 over ATM (32-bit CRC), and CRC-10 for OAM cells (10-bit CRC), col. 18, ll 1-16 and 29-37, and col. 20, claim 2.

Given the teaching of Richards et al., it would have been obvious to one skilled in the art at the time the invention was made to include generating generate a validity check (error check calculation) selected from a group consisting of CRC (10-bit CRC), AAL5 over ATM (32-bit CRC), and CRC-10 for OAM cells (10-bit CRC) into the stream editor subsystem of Chow et al. The motivation/suggestion to do so would have been to perform an error check calculation on the ATM cell as taught by Richards et al. (col. 20, claim 2).

8. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow et al. (USPN 6,052,387).

Art Unit: 2663

Per claims 7 and 14, Chow et al. do not explicitly teach that the protocol data unit receiver subsystem and said virtual segmentation subsystem further process a plurality of interleaved portions of different protocol data units.

However, Chow et al. teach that the PDU data are scattered in different buffers at different locations in the memory (col. 3, ll 31-35), and the data received by the software driver 40 at any given time may be a data portion of a new PDU or a data portion of an existing PDU (Fig. 5B and col. 6, ll 13-21).

Therefore, it would have been obvious to one skilled in the art to modify the protocol data unit receiver subsystem (the processor 34 in Fig. 3, see rejection claim 1) to include processing a plurality of interleaved portions of different protocol data units. The motivation/suggestion to such modification would have been to enable the system to process portions of different PDUs immediately as received by the system in order to minimize the overall transmission delay of the data

Allowable Subject Matter

9. Claims 15-19 and 21 are allowed. The prior art alone or in combination fail to teach or make obvious on the following when considered in combination with other limitations in the claim: a routing switch processor that receives the protocol data unit from the fast pattern processor which performs pattern recognition and classification on the packets and the protocol data unit as recited in claim 15.

Art Unit: 2663

10. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

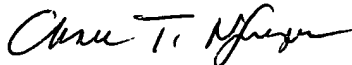
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
October 19, 2004
NJ


CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600